

# EXHIBIT QQ

## SUPPLEMENT FOR THE YEAR 2017 OF THE SENTRY LIFE INSURANCE COMPANY

**Non-Guaranteed Opinion for Exhibit 5****SLIC 2017 EXHIBIT 5 INTERROGATORY 3**

Since the response to Exhibit 5 Interrogatory 3 indicates that the reporting entity issues and has in force contracts that contain nonguaranteed elements, the following response is required.

**DETERMINATION PROCEDURES**

The assumptions upon which nonguaranteed elements are based will be periodically reviewed. Interest rate assumptions for inforce and new policies will be reviewed quarterly. Mortality assumptions for inforce policies will be reviewed whenever the mortality assumptions for comparable new issues are changed, but in no event more often than once each policy year nor less often than once every five policy years. If actual results differ materially from expected experience such that the profit margin is less than 0% or greater than 10%, then the Company may re-establish nonguaranteed elements on all new and inforce business. Profit margin is equal to the present value of pre-tax profits divided by the present value of premiums over the next 20 policy years. Reasonable assumptions as to investment income, mortality, and expenses are selected based on the anticipated experience factors. The new assumptions will incorporate expected future experience, but will not be adjusted to distribute prior profits or recoup past losses. When assumptions are adjusted, all assumptions will be updated to reflect anticipated experience, not just the assumptions found to be materially different. Current assumptions will be incorporated up to the point of changes and revised assumptions afterwards.

At each redetermination (or determination), the nonguaranteed elements are adjusted for differences between experience anticipated at the time of redetermination and that underlying the then-current nonguaranteed elements, with the objective to attain established profit margins for that class of contracts while maintaining overall Company solvency.

Nonguaranteed elements are determined on a basis equitable to all contract holders of a given contract class. Contract classes have been established by:

- 1) Similar type of contract,
- 2) Same structure of guaranteed and nonguaranteed charges and benefits,
- 3) Same sets of anticipated experience factors, and
- 4) Issue dates for a particular continuous time period.

The general procedures and methods used to determine the nonguaranteed elements are done in accordance with generally accepted actuarial principles and practices.

All changes in nonguaranteed elements will be presented to the Board of the Company for adoption.

**ACTUARIAL INTERROGATORIES**

I. *Since this statement was last filed, have there been any changes in the values of nonguaranteed elements on new or existing business authorized for illustration by the reporting entity? If yes, describe the changes that were made.*

Yes. Interest rates authorized for illustrations were changed periodically in accordance with established policies and procedures.

II. *Since this statement was last filed, have there been any changes in the values of nonguaranteed elements actually charged or credited? If yes, describe the changes that were made.*

Yes. Interest rates credited were changed periodically in accordance with established policies and procedures.

III. *Indicate to what extent any changes described in I. or II. varies from the contract and/or general methods and procedures last reported for the affected contracts.*

None.

IV. *Are the anticipated experience factors underlying any nonguaranteed elements different from current experience? If yes, describe in general terms the ways in which future experience is anticipated to differ from current experience and the nonguaranteed element factors that are affected by such anticipation.*

No.

V. *State whether anticipated investment income experience factors are based on: (a) a portfolio average approach, (b) an investment generation approach, or (c) other. If (b) or (c), describe the general basis*

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*used, including the investment generation groupings.*

(b) The investment generation approach is used. It is based on the cash flows generated by each class of contracts. The cash flows are tracked quarterly, creating four investment generation groupings annually.

VI. *Describe how the reporting entity allocates anticipated experience among its various classes of business.*

The anticipated experience for a class of business is based on prior experience to the extent it is considered a valid basis. The anticipated experience is generally not allocated to each class, but is developed for each class.

VII. *Does the undersigned believe there is a substantial probability that illustrations authorized by the reporting entity to be presented on new and existing business cannot be supported by currently anticipated experience? If yes, indicate which classes and explain.*

No.

VIII. *Describe any aspects of the determination of nonguaranteed elements not covered above that involve material departures from the Actuarial Standards of Practice issued by the Actuarial Standards Board, applicable to the determination of nonguaranteed elements.*

None.

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ACTUARIAL OPINION

I, Dale E. Lange, Associate Actuary - L&H, am an employee of Sentry Insurance and a Member of the American Academy of Actuaries. I have examined the actuarial assumptions and methods used in determining nonguaranteed elements for the individual life insurance and annuity contracts of the reporting entity issued for delivery in the United States. The nonguaranteed elements included are those:

- i. Paid, credited, charged or determined in 2017; and
- ii. Authorized by the reporting entity to be illustrated on new and existing business during 2017.

My examination included such review of the actuarial assumptions and methods of the underlying basic records and such tests of the actuarial calculations, as I considered necessary. In my opinion, the nonguaranteed elements described above have been determined in accordance with generally accepted actuarial principles and practices applicable to the determination of nonguaranteed elements, except as described above.

*Dale E. Lange*

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Signature of Actuary

January 26, 2018  
Date

